

17 AUGUST 2021

Table of Contents

Introduction	[1]
The Property	[5]
Background	[12]
Outline of this Decision	[27]
Statutory and contractual framework	[28]
Legal principles	[34]
Approach to repairs	[55]
Damage	
Introduction	[60]
Geotechnical issues	[65]
Foundations	[68]
Kitchen	[111]
Study and dining room	[124]
Bathroom and toilet	[135]
Bedroom 1	[140]
Bedroom 2	[142]
Bedroom 3	[149]
Living room	[154]
Chimney and fireplace	[181]
Hall and entrance door	[185]
Wall verticality	[188]
Exterior, including cladding	[194]
Driveway and hard landscaping	[205]
Conclusion on damage	[209]
Remediation required	
General	[214]
Foundations	[215]
External features, cladding and paintwork	[219]
Interior linings and associated works	[220]
Chimney repairs	[223]
Cost of remedial works	[224]
Apportionment	[233]
Result	[238]

Introduction

[1] A G is the owner of a residential property at XXXX , Christchurch. He has owned the property since 1994.

[2] The property was damaged in the Canterbury Earthquake Sequence (CES). That is not in dispute between the parties.

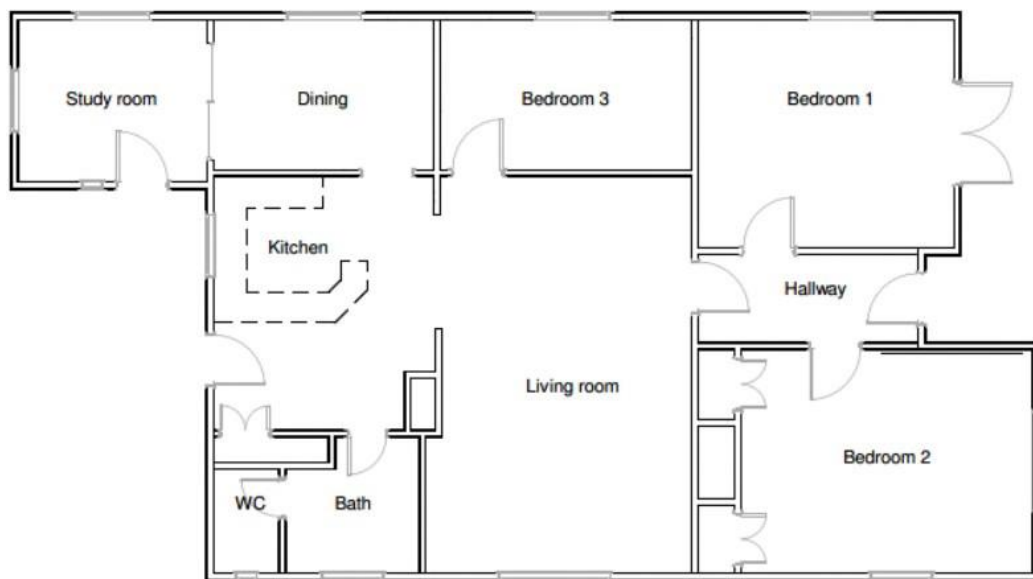
[3] What is in dispute is the extent of damage suffered to the property, whether that damage was caused by the CES and how to repair that damage.

[4] Key to that determination is whether the CES damaged the foundations to the property and whether those foundations need to be fully replaced. Many of the issues between the parties are resolved once that issue is determined.

The Property

[5] The property is a single storey dwelling with a timber framed structure with an exterior timber weatherboard cladding founded partially on a concrete perimeter beam with internal piles. The roof is lightweight metal cladding. There are three bedrooms, a living area, a kitchen and dining area, one bathroom and toilet and a study.

[6] The layout of the property is set out below. The bedroom numbering in this Decision is as set out in this diagram.



[7] The property is located in the residential green zone, Technical Category 2, yellow, meaning minor to moderate land damage from liquefaction is possible in future large earthquakes.

[8] The property has been renovated and extended over the course of its life. There have been three key additions to the property:

- (a) The addition of the front section including bedrooms 1 and 2 around 1925;
- (b) The addition of the rear section including the kitchen and dining area around 1955;
- (c) The addition of a study at the rear of the property around 1990.

[9] None of this work was carried out by Mr G.

[10] Taking the front elevation of the property as the North elevation, over this time the orientation of the roof line changed from an E-W orientation to an N-S orientation. That is, the roofline now has the ridgeline running N-S¹.

[11] The property has been and remains habitable.

Background

[12] At the time of the earthquakes, Mr G was insured with Vero Insurance New Zealand Limited. By virtue of s18 of the Earthquake Commission Act 1993 (EQC Act), the residential dwelling was deemed to be insured against natural disaster by EQC. The terms of the policy relevant to this Decision are discussed below.

[13] Mr G made two claims to EQC following the earthquakes: (a)

CLM/2010/079536 – 4 September 2010; and

(b) CLM/2011/112843 – 22 February 2011.

[14] EQC made various payments to Mr G arising from these claims as follows:

- (a) \$16,230 (less an excess of \$220.04) for the September 2010 earthquake;

¹ Mr Day's affidavit, exhibits "TD-C" and "TD-D"

- (b) \$1,513.29 for urgent works and \$4,260.90 for clean heat works arising from the September 2010 earthquake;
- (c) \$150.00 paid to Christchurch City Council; and
- (d) \$59,536.54 (less an excess of \$595.37) for the February 2011 earthquake.

[15] The total amount paid by EQC to Mr G to date is, therefore, \$80,875.31.

[16] EQC also sent a cheque to Mr G for \$5,000.18 towards the February 2011 earthquake claim, but that cheque has not been presented. I ignore that payment for the purposes of this Decision.

[17] Mr G did not make a claim to Vero until mid-2016. That claim was in relation to external property damage and was settled by Vero. The terms of the settlement were disclosed in this claim.

[18] Vero raises the issue of late notification, but nothing turns on that because:

- (a) I find that there is no prejudice to Vero arising from the alleged late notification;
- (b) Vero could have independently decided to investigate whether the dwelling had suffered earthquake damage when it was notified of the external property damage in mid-2016; and
- (c) Mr G's comments about the claims being over or under cap or whether he thought there was damage to the property or not are of no significance as to whether Vero's policy would respond.

[19] Other than to remove the damaged chimneys at the property and the replacement of the existing fireplace in the living room with a new woodburner, there have not been any significant earthquake related repairs undertaken to the property. Mr G has carried out some cosmetic works to the property.

[20] To summarise the parties' positions, it is that:

- (a) Mr G seeks an order that the property be repaired in accordance with his experts' scope in an amount of \$402,383 (including GST);
- (b) EQC considers that the total cost of repairing all damage across both earthquakes is \$96,294.40 (including GST) (being \$16,230.00 for the

September 2010 event and \$80,064.40 for the February 2011 event), which amounts are less than the two potential “cap” payments of \$115,000 per event; and

- (c) Vero says that until both caps are exhausted, which is not the case in this claim, it has no liability at all to Mr G under the policy, which is a “top up policy” only.

[21] Mr G commenced proceedings in the Christchurch High Court in 2017. Those proceedings were transferred to the Canterbury Earthquakes Insurance Tribunal in 2019.

[22] By the time that transfer took place, the parties had engaged structural engineers and those structural engineers had conferred and produced a Joint Experts’ Report to the Court².

[23] That report preceded steps taken in this Tribunal, but is nonetheless relevant evidence setting out the experts’ views at that time. It was part of the evidence in the hearing.

[24] That report recorded:

- (a) There was agreement that there were cracks to the perimeter foundation, but disagreement as to the extent to which they were caused by the earthquakes and disagreement as to the repair methodology;
- (b) There was agreement that the floor levels varied by approximately 56mm across the footprint of the house, but disagreement as to the extent that that was caused by the earthquakes, or whether the levels reflect construction and long term settlement;
- (c) There was agreement that there was minor dislevelment in the kitchen caused by the earthquakes;
- (d) There was disagreement as to whether cladding damage was caused by the earthquakes or was a function of its age, maintenance history and initial construction;
- (e) There was disagreement as to the cause of any observed wall verticality issues, the respondents’ experts considering that any lack of verticality was the result of the shape of the underlying timber framing and that there was no mechanism

² Mr Day’s affidavit, exhibit “TD-D”

that would induce bending of the wall framing. That is, the connections at the base of the walls were not sufficient to enable a fixed end moment capable of inducing a residual deformation or bend to the timber framing. There was disagreement as to the trend of any tilt being related to the earthquakes and whether instead wall verticality was locked into place during construction;

- (f) There was general agreement as to the damage to roof and roof framing, including the chimney; and
- (g) There was agreement that there is some damage to the internal linings but disagreement as to the extent of repairs required. It was noted that the front door frame had moved as the lock striker plate no longer aligned. It was agreed that the cupboards in the south eastern bedroom (bedroom 2) had moved and that this was likely as a result of the movement of the heavy chimney behind that wall.

[25] The Joint Expert's Report recorded that there was general agreement as to some internal lining repairs required and relevening required to the kitchen area, but disagreement as to the alleged general damage to foundations such that a full foundation replacement was required.

[26] The need to replace the foundations is, therefore, the primary disputed factual matter in this claim. It is the respondents' experts' views that there is no corroborating evidence in the property other than in the kitchen to confirm material foundation movement in the property as a result of the earthquakes.

Outline of this Decision

[27] The Decision is structured as follows:

- (a) Statutory and contractual framework;
- (b) Legal principles;
- (c) Approach to repairs;
- (d) Damage;
- (e) Remediation required;
- (f) Cost of remedial works;

(g) Apportionment;

(h) Result.

Statutory and contractual framework

[28] EQC provides statutory insurance cover to owners of residential buildings and land for “natural disaster damage”³, being “physical loss or damage to the property occurring as the direct result of a natural disaster”⁴.

[29] “Physical loss or damage” requires a material physical change to property that impairs its value or usefulness”⁵. In this context, this means an earthquake induced physical change to the material or structure of the property which affects its use or amenity and which is material.

[30] Section 30 of the EQC Act and Vero’s policy terms mean that Vero only insures loss or damage beyond EQC’s liability for any given event. That liability is the amount of \$115,000 per event. This is referred to as EQC’s “cap” so that only claims “beyond cap” become claims that Vero must respond to.

[31] Mr G held insurance with Vero at the time of the earthquakes. The policy covers him for damage caused by an earthquake on certain terms. They include:

- (a) EQC must have accepted liability for the damage under the EQC Act;
- (b) The amount payable under the policy is the costs of reinstatement less any amount payable under the EQC Act and any excess.

[32] Vero is obliged to pay for the costs incurred in repairing damage caused by an earthquake in rebuilding or repairing the damaged portion of the property using currently equivalent building materials and techniques to a standard or specification no more extensive or better than its condition “when new”. Any building work undertaken must comply with the Building Act and Code.

[33] So, for Mr G the position is that he is entitled to recover up to the statutory cap from EQC for any accepted event of loss or damage and, for any particular event, should the loss or

³EQC, ss 18 and 19

⁴EQC Act, s2(1)

⁵H v Earthquake Commission [2019] NZCA 373 at [8]

damage exceed the statutory cap, he is, subject to any particular policy exclusions, entitled to recover from Vero the costs repairing the damage in excess of that.

Legal principles

[34] There are a number of legal principles applying to the case. They are discussed below.

Burden of Proof

[35] Mr G bears the onus of proving the claims against EQC and Vero. He must prove on the balance of probabilities that the earthquake(s) caused the damage identified⁶. Balance of probabilities means more than 50% or more likely than not. The existence of damage is insufficient, there must be evidence to prove that the earthquake(s) caused identified damage.

Physical Damage

[36] Both the EQC Act and Vero's policy require physical loss or damage to the property. That expression is described as "a material physical change to property that impairs its value or usefulness."⁷ The change must be material or more than de minimis.

[37] Where there is pre-existing damage, then the Tribunal must make an objective assessment of whether the earthquake has caused any material difference. Pre-existing damage to a building element may be so significant that minor additional damage makes no material difference to its value, amenity or usefulness. It is again, a matter of the Tribunal making a robust assessment based on the evidence before it.

[38] That loss of amenity will be informed also by the type of building element. A structural element will be considered in terms of its structural or functional performance, whereas an element with an aesthetic purpose, the damage must affect that aesthetic purpose. Examples relevant to Mr G's claim are the foundations and interior wall linings.

Causation

[39] Mr G must show that the damage claimed for was caused by the relevant earthquake. He must prove that the loss was⁸:

⁶ H v Earthquake Commission [2019] NZCA 373 at [7]

⁷ Ibid at [8]

⁸ M v IAG [2020] NZCA 319 at [34]

“the direct cause, the immediate cause from which the loss arose as a natural consequence, the dominant cause, or the real efficient cause...”

[40] The Tribunal must apply common sense to this determination, as it is accepted that it may not be possible to determine causation with absolute certainty. The Tribunal may draw “robust inferences of causation”⁹, but must do so only where there is sufficient supporting material to prove causation.

[41] In this case, that means that the Tribunal will need to make a decision on the state of Mr G’s property before the earthquake and now and decide if it is more likely than not that the earthquake(s) caused any proven damage.

[42] Vero makes the observation that in *H v EQC & Anor*¹⁰ the Court of Appeal stated:

“...It is not sufficient for [the insured] to point to the [undisputed] dislevelment of the house’s floor or to establish that it is possible that this might have been caused or contributed to by the earthquakes. He needs to show on the balance of probabilities that differential settlement of the house was caused or materially contributed to by the earthquakes.”

Cost incurred policy

[43] The policy held by Mr G with Vero is a cost incurred policy. That means that Mr G must actually incur the cost of repair before he can recover it from Vero.

[44] Vero submits therefore, that, if it makes any order against Vero, the Tribunal should make a declaration that Mr G is entitled to recover payment up to the costs of the repair the Tribunal concludes is required.

Evidential Matters

[45] The Tribunal is not bound by the Evidence Act 2006, however, it will accord different weight to evidence depending upon its probative value.

[46] Mr G’s position is that the property has suffered sufficient damage that a full foundation replacement is required. For the reasons that follow, I do not consider that the evidence supports this view.

⁹ Accident Compensation Corporation v Ambros [2007] NZCA 304

¹⁰ H v EQC and Anor [2019] NZCA 373 at [7]

[47] Mr G holds firm views about damage to his property. I must when considering his evidence be alive to heightened awareness and confirmation bias in his recollection of the property pre and post the earthquakes¹¹. I must also consider the expert evidence, much of which is not supportive of Mr G's case. Mr G has retained two structural engineers, Mr Zanaty and, later, Mr Kearney. With respect to their views, they are significantly at odds with the views of both Mr Day and Mr Thurlow and other of the respondents' experts.

[48] As Mr Thurlow notes in his evidence, the evidence advanced by Mr G's engineer (Mr Kearney) at the hearing was at a position further apart than the experts were at the High Court Joint Experts' Report of October 2018 and the Tribunal directed expert conferral in January 2020.

[49] Mr G raises issues around the independence of Mr Day and Mr Haynes to give evidence. I dismiss his criticism of them. Both Mr Day and Mr Haynes complied with the obligations they owed to the Tribunal when they gave evidence.

[50] As Cooke J noted in a recent building defects case¹², there is a difference between independence, which is not a requirement for the Code of Conduct for expert witnesses, and impartiality, which is. An expert may not be completely independent, but can give expert evidence if they do so impartially. I consider that both Mr Day and Mr Haynes gave their evidence impartially.

[51] Mr G also draws into question the competency of Mr Maria to give evidence. Again, I have considered his evidence and given it due weight, noting that his expertise or alleged lack of expertise was not put to him in cross-examination.

[52] The evidence Mr G purports to give about Elliott Sinclair's professional advice to Mr G's mother, or the adequacy of it, is irrelevant.

[53] Mr G also seeks to rely on a number of reports from witnesses that were not called to the hearing. While I am prepared to allow their admission as evidence, I intend to give greater weight to the evidence of those expert witnesses that attended and were cross-examined. Their evidence has more probative value, as it has been subject to critique at the hearing.

[54] Finally, in his closing submissions, Mr G sought to refer to videos he had taken of the property to support his submissions. As those videos were not introduced at the hearing

¹¹ G v The Earthquake Commission [2019] NZHC 2176 at [220]-[222]

¹² P v Hewitt Building Limited [2021] NZHC 1460 at [46]

and no other party was given the opportunity to comment on them or cross-examine on them, I do not accept them as evidence.

Approach to repairs

Repair standard

[55] The EQC Act requires repairs or reinstatements of damaged property to be completed to the “replacement value” standard. Similar to the Vero “when new” standard addressed below, the replacement value approach requires the building to be remediated “to a condition substantially the same as but not better or more extensive than its condition when new...”¹³

[56] Vero’s policy with Mr G requires it to rebuild or repair damage to his property to a “when new” standard. This standard has been addressed in two cases, *F v IAG New Zealand Limited*¹⁴ and *P v Vero Insurance New Zealand Limited*¹⁵.

[57] Those cases make it clear that:

- (a) The “when new” standard is a temporal standard relating to the state of the house when it was first built. It does not require restoration to modern standards (ie, the “as new” standard);
- (b) The “when new” standard (i) does not require replication of the original, and (ii) modern materials and techniques may still be used;
- (c) The standard of repair required is to “render the fact of the earthquake damage immaterial”. This means that “the house must, as far as possible, be put in the same position it would have been in had the earthquakes not occurred”;
- (d) The standard of repair applies to the purpose of the damaged component:
 - (i) Where a component only has a functional purpose, the insurer’s obligation is met by restoring that functional purpose to its “when new” condition; and

¹³EQC Act s2(1)

¹⁴[2018] NZHC 3447 at [28], [29] and [70]

¹⁵[2015] NZHC 1675 at [117]

- (ii) When a component also has an aesthetic purpose, the remediation strategy must also restore the original aesthetic quality of the component.

[58] These comments are subject to the gloss that any building work done will comply with the Building Act and Code.

[59] The Tribunal will adopt this approach to the remediation of any proven earthquake damage to Mr G's property.

Damage

Introduction

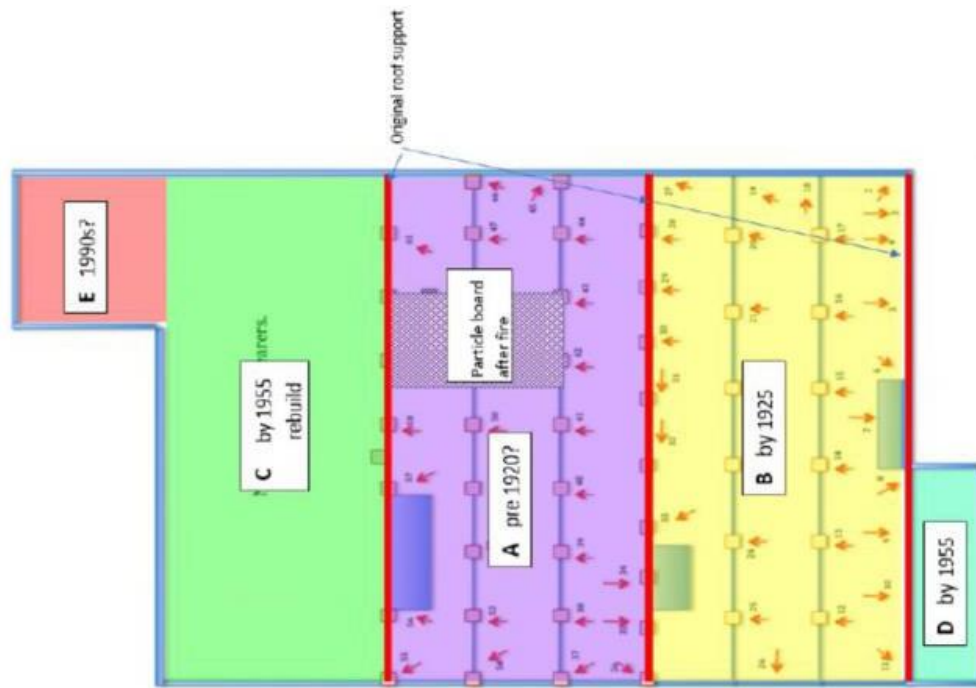
[60] Having set out above the framework upon which this Decision proceeds, the Tribunal now turns to consider the claims for damage and the Tribunal's views on the remediation approach to proven damage.

[61] The parties all called expert evidence. The Tribunal had the benefit of evidence from geotechnical and structural engineers, quantity surveyors and licensed building practitioners.

[62] The Tribunal appointed a structural engineer, Ms Mary Ann Halliday, to assist it. Ms Halliday convened a meeting of the parties' engineers at Mr G's home. She prepared a Technical Advice Document dated 28 February 2020. She attended the hearing.

[63] The respondents' experts' position is that the property suffered some damage, but that damage it suffered was minor and much of the evidence of dislevelment is explicable by historic settlement of the property. They also say that the incremental alteration of the dwelling over time has "locked in" existing dislevelment.

[64] Ms Halliday's Technical Advice Document provided a plan outlining the historical extensions to the property as follows:



Geotechnical issues

[65] The geotechnical evidence is that the property is founded on topsoil and uncontrolled fill layers that are generally not considered suitable founding soils now. Mr King explained that the organic contents in the topsoils would result in consolidation. This consolidation would translate into settlement in the property that would not necessarily be uniform. Ms Halliday’s Technical Advice Documents notes this.

[66] As EQC notes, the geotechnical evidence does not assist greatly in the determination of the issue of settlement in the foundations, as the ground conditions were such that both an earthquake related mechanism and a non-earthquake mechanism for settlement were possible.

[67] The most telling evidence that the property had experienced historical settlement is the “locking in” (to use Ms Halliday’s expression) of existing dislevelment when subsequent additions were made to the property. That fact supports the finding that the settlement in the house is mostly, if not all, historical. I address the areas where the house has settled as a result of the earthquakes below.

Foundations

[68] A key plank of Mr G’s case is that the foundations to the property were damaged to the extent where a full replacement of the foundation system is required.

[69] It is agreed that there is around 56mm of total dislevelment across the floor of the property. The respondents and Ms Halliday say that this is due to historic settlement and/or locked in dislevelment due to the incremental construction of the property.

[70] There was significant debate amongst the experts as to the cause of floor dislevelment in Mr G's property. The fact of the existence of dislevelment is not in issue.

[71] The issue is whether the earthquakes have caused or materially contributed to that dislevelment. The evidence of Ms Halliday that each major addition locked in the existing deformations means that the existence of dislevelment is not the answer, it is whether it was caused or contributed to by the earthquakes.

[72] Looking at the evidence about the elements of the foundation system it is clear that the foundation system as a whole has not failed nor been materially detrimentally affected by the earthquakes.

[73] Ms Halliday's Technical Advice Document concludes that there was "little evidence supporting the displacements that would indicate that the foundations need to be rebuilt. Discussions were heading towards agreement of re-level in the order of 5 to 20mm."

[74] The summary in Ms Halliday's report merits inclusion in full:

- (a) "Each major addition locked in the existing deformations. This is evidenced by the lack of packing in the foundations, and common practice...It is not likely that the whole of this house has been level since it was first constructed 100 years ago."
- (b) "Foundations will go down wherever the loads are higher. The original roofs put loads in different places (red lines) to the re-roof by 1955 which moved the loads to the blue lines. The foundation movement is consistent with the history of the load and with locations that have had water problems."
- (c) "When the particle floor was replaced after a fire in 2005 it is acknowledged that the floor was not level. The ceiling was "levelled". This does not mean that the ceiling had zero height difference. Level to a builder means within the Gib tolerance of 4mm per 1.8m. Over the lounge area this means about 10mm. The builder would not like "perfectly level" because the eye can read changes in wall height. By trying to level the ceiling the wall heights in the lounge now

vary by 8mm. The three dimensional scan done by Elliott Sinclair provides the 2019 geometry...”

- (d) The bench levels [in the kitchen] taken in 2017 by Tindus (for Vero) are a good indication that there has been movement in this area of about 16mm. Some of this could be due to ground movement between 1995 and 2011. But most is likely attributable to the earthquakes. The low point has been exacerbated by the water leak. Levels in 2019 (and the now springy floor) indicate that the floor in the dining room (other side of kitchen wall) has gone down another 10mm since 2017.”

[75] Having discussed the issues with the parties’ experts, having inspected the property in detail and having applied her own expertise to the issues, Ms Halliday’s report concludes that:

- (a) There was historical dislevelment in the property;
- (b) What damage occurred to the property from the earthquakes does not warrant a full rebuild of the foundations.

Perimeter Beam

[76] The evidence of Messrs Day and Thurlow was that the perimeter beam, whilst having cracks, has not failed and maintains its intended structural performance. They considered that there was no material change in the performance of the perimeter beam. The cracks that exist were either historic or at most somewhat exacerbated by the earthquakes. Either mechanism has the same result, the perimeter beam continues to perform its intended function.

[77] The evidence of Mr Thurlow was that 4 lineal metres of epoxy repairs followed by painting, while not strictly necessary, should be undertaken. That view is adopted and provided for in the repair methodology below.

[78] Mr Kearney, whilst advancing the proposition that the perimeter beam and the foundation system itself should be completely replaced due to its earthquake damaged state was moved under cross-examination to revisit his views when faced with the evidence of Messrs Day and Thurlow. In particular, he agreed that:

- (a) The cracks present were rounded due to weathering and the crack under the French doors of bedroom 1 was there before the earthquakes; and

- (b) Structurally the perimeter beam was still performing the same function as it was before the earthquakes and that there was no change to the perimeter beam's ability to support a vertical load.

[79] To be fair to Mr Kearney, he was in part supporting reports produced by other persons from Terra Consulting. All reports from Terra that predated January 2020 were prepared without Mr Kearney having attended the site. Mr Kearney visited the property twice, on 20 and 29 January 2020.

[80] The Tribunal will accord lesser weight to those Terra reports and the other reports commissioned by Mr G when the author of the report was not called to give evidence and be subjected to cross-examination. The Tribunal will give greater weight to the evidence of Messrs Day and Thurlow, due to their direct involvement in the claim, actual attendances on site and authorship of the relevant reports on which they were cross-examined.

[81] This is not to intend any criticism of Mr Kearney's evidence, I found him to be a helpful and responsible witness. He changed his views when appropriate having heard the evidence of Messrs Day and Thurlow. He eventually came to accept that the respondents' views on foundation failure/damage were likely correct.

[82] There is historical cracking to the perimeter ring foundation. The majority of the cracks are well weathered, evidencing that they were historical. Any movement of the cracks in the earthquakes was not material.

[83] The structural engineering experts agreed that the structural integrity of the perimeter ring foundation was unaffected by the earthquakes. That is a key consideration when looking at a requirement to repair this building element. Mr Kearney accepted that aesthetically the perimeter ring foundation is unaffected.

[84] Following the examination of the issue of the functionality of the perimeter beam, the structural engineering witnesses, including Ms Halliday, agreed with the proposition that the perimeter beam is performing as it was performing prior to the earthquakes notwithstanding that there may perhaps be some more cracking or exacerbation of existing historical cracking.

[85] There are also various external indicia that support the argument that the perimeter beam (and the foundation system generally) has not failed. There is no evidence of:

- (a) Recent movement between the path to the front door and the adjoining steps and perimeter ring foundation;

- (b) The foundations “punching” into the ground;
- (c) Shearing or separation between the gully traps and the foundations;
- (d) Guttering falling the wrong way; and
- (e) Dislevelment in the weatherboards beyond normal historical settlement.

[86] All of these would have been expected had the property experienced the sudden earthquake-caused movement of circa 50mm as alleged. Rather, the evidence is that the perimeter beam did not materially move or become altered in a way that impacted on its amenity.

[87] I find that the perimeter beam was not materially damaged by the earthquakes and that it maintains its purposeful functionality. It does not need to be replaced.

Piles

[88] The state of the piles under the property reflect both its age and the construction methods used when it was built – noting that the property was built in different parts over time. The cavity critter report records a lack of connection between the piles and bearers and wedges or packers on some of the piles¹⁶. That state of affairs existed when the property was built and exists now. The cavity critter report also records extensive borer and rot damage to bearers.

[89] The house uses a range of different pile systems as set out by Ms Halliday (adopting her numbering from her plan):

- (a) “A” - Original part of house – stone blocks;
- (b) “B” - Addition in 1925 – concrete “Gerry” cans;
- (c) “C” and “D” - Addition in 1955 – ordinary concrete piles;
- (d) “E” – Addition in 1990’s – concrete floor slab.

[90] The piles have wooden wedges used as packing or tops cut from them to remedy the uneven surface of the piles so they meet the bearers. This is all historical. This cutting and packing pre-dated the earthquakes. There is little evidence of any movement arising from the earthquakes. The fact of a particular pile having a lean in it is not evidence supporting

¹⁶ Ms Summers’ affidavit, exhibit “SS-M”

earthquake damage, particularly where the lean has been remedied historically by packing to meet the bearers.

[91] There is evidence that there has been desiccation cracking in the ground around the piles and some evidence of long-term movement in the near surface materials due to the shallow footing of the piles.

[92] What is also significant is that the packing used to level the piles against the bearers has not moved, which is supportive of the argument that the earthquakes have not caused any material movement in the piles to necessitate or justify replacement. Mr Kearney agreed that the earthquakes did not dislodge the packers¹⁷.

[93] All structural engineering experts agreed that, with the exception of the kitchen area discussed below, the piles continue to perform the same as they performed prior to the earthquakes. This was an old house, built over time, using a variety of now outdated foundation methods and products that has evidence of settlement locked in.

[94] There is no evidence that the piles have been materially affected by the earthquakes to the extent that a full rebuild of the foundations is required. The evidence does not, on the balance of probabilities, show that the earthquakes caused any generalised pile tilting or failure.

[95] The issue of the reasons for the lean in the pile numbered 31 in the Cavity Critter report occupied quite some time at the hearing, both as to its cause and whether it contributed to liveliness in the floor. The photographic evidence shows that desiccation cracking around that pile is more likely supportive of that pile being already leaning before the earthquake. The photographic evidence relating to pile 31 shows some dirt dug out around it, which could have contributed to the lean.

[96] Whilst there is some evidence that the movement of pile 31 was historical, there appears to be some support for the proposition that the earthquakes did impact this pile sufficiently that it is reasonable to conclude that the earthquakes impacted more than de minimis on this particular pile. It may have been performing less than ideally before the earthquakes, but the earthquakes have acted to detrimentally affect its functionality.

[97] I, therefore, conclude that pile 31 was impacted by the earthquakes and should be replaced. That can be achieved by lifting the floor in that area and replacing it.

¹⁷NOE A page 308

[98] I note the apparent lean to pile 34. That pile has a packer which suggests that attempt has been made historically to correct its lean. No order is made concerning that pile.

[99] There is also the kitchen and dining area. In this area the experts are generally agreed that the foundations have been materially adversely affected by the earthquakes and require remediation. That is discussed below.

Floor liveliness

[100] Mr G also says that the existence of liveliness in the floor of his property is evidence of earthquake damage and supports his claim to a full foundation replacement. As set out above, the evidence does not support that.

[101] The floor liveliness is explicable by the lack of mechanical fixings between the piles and bearers. This is an as built detail commensurate with the age of the construction.

[102] In addition, the evidence of Mr Thurlow was that the subfloor was damp, had rot and borer infestation and that concrete and stone piles will tend to pull water up from the ground into the pile head, causing moisture in the bearers.

[103] The floor liveliness is explained by the existing construction and state of the subfloor. This includes a lack of fixing between piles and bearers and the condition of the timbers, including moisture effects on them over time. There is no evidence that this is an earthquake related cause. Mr Kearney was unable to discount that liveliness was not a pre-existing condition. He was unable to say what caused it¹⁸.

[104] Ms Halliday was also of the view that the retaining of moisture in the subfloor would lead to perhaps 5mm of movement in the floor. Given the fact that there was no mechanical fixing of the piles to the bearers, 5mm would be sufficient to allow liveliness, but it is not earthquake damage.

[105] Any particular floor liveliness in the location of pile 31 will also be addressed by that pile being replaced.

¹⁸NOE A page 312

Conclusion on foundations

[106] With the exception of the kitchen/dining area, the evidence does not support a finding that the foundations were materially adversely affected by the CES or that a complete replacement of the foundations is justified.

[107] The current dislevelment is historic. EQC submits, and I agree, that the following factors support a finding that the dislevelment was pre-existing:

- (a) The age and construction of the house;
- (b) A lack of correlation between the floor and ceiling levels;
- (c) The lack of extensive internal damage;
- (d) The fall of the gutters; and
- (e) The lack of external damage.

[108] Neither the perimeter beam nor the piling system generally has suffered a material change in functionality as a result of the earthquakes. There is no evidence of separation of the house from gully traps or the perimeter ring foundation as would be expected had the house suffered the extent of damage suggested by Mr G and his witnesses.

[109] The minor hogging of the floor in the lounge room is consistent with historic settlement and not sudden, earthquake related, damage. This is discussed later.

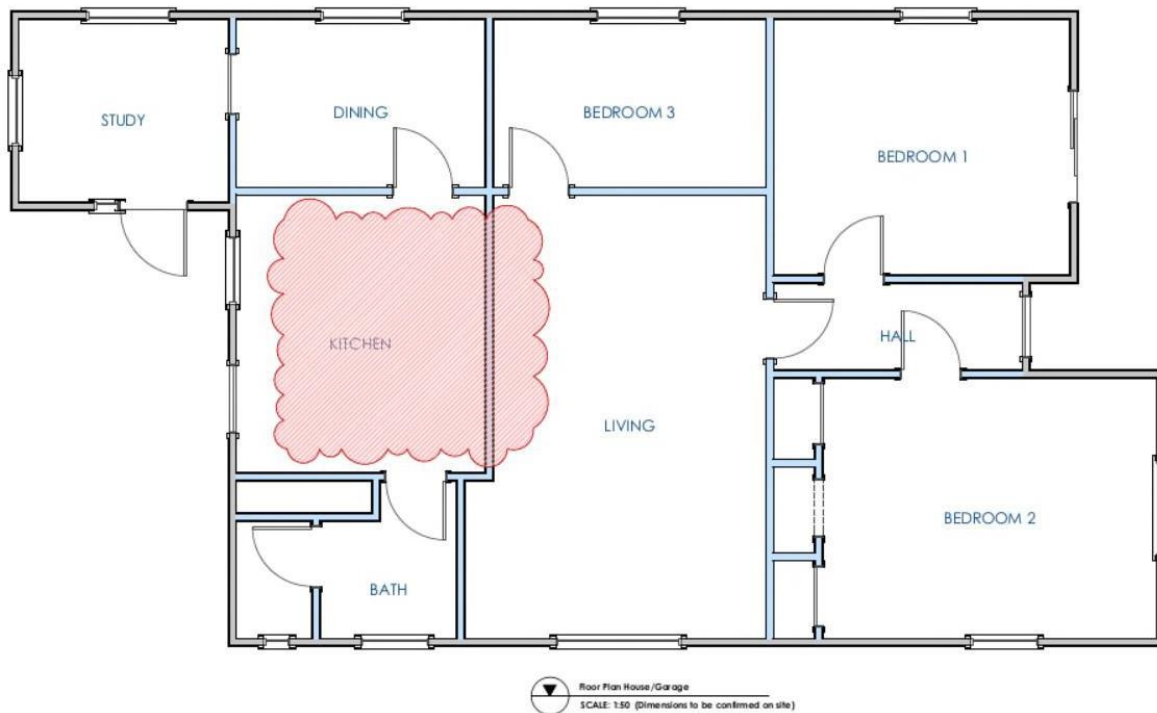
[110] The Tribunal finds that the perimeter beam should be repaired as suggested by the respondents' experts and that pile 31 should be replaced. Otherwise, a complete rebuild of the foundations is not warranted.

Kitchen

[111] It is agreed by the experts that the kitchen foundations have suffered earthquake related settlement. The kitchen floor has dropped by around 16mm. I accept Mr G's evidence that when he had the kitchen renovated, he insisted on the kitchen benches being made level by the contractor. Such a matter is a readily observable indicator of earthquake damage. Mr G would not have accepted the kitchen benches being left in an unlevel state and his evidence was that he had the contractors back to remedy what he considered at the time to be unacceptable dislevelment of the kitchen bench following installation.

[112] So, the existence of dislevelment in the benchtops and sticking of doors in the kitchen cabinetry following the earthquakes is persuasive evidence of damage. The Tribunal finds that the kitchen floor has dropped as a result of earthquake damage to the foundations in that area.

[113] Mr Day identified the area as follows:



[114] The Tribunal finds that the earthquakes caused damage to the kitchen which included damage to the foundations in that area, together with associated damage to flooring, wall coverings and the dislevelment of the kitchen benches and cabinetry.

[115] The debate then turns to what is required to remediate that damage. The Tribunal heard from Mr G's expert, Mr Kearney and his builder, Mr Paltridge, about what was required to remediate this damage. That approach was to a large extent predicated on there being a finding that the entire foundations of the house were to be rebuilt. They did not consider that localised releveling was possible.

[116] Both Mr Day and Mr Thurlow held the view that localised releveling was possible. That was supported by Mr Creighton, although his investigation of the house was not particularly extensive. However, as a Licensed Building Practitioner Mr Creighton's evidence was that it was possible to rebuild the foundations in the kitchen area and that the required 150mm clearance to ground was achievable. He gave evidence that the proposed work would meet the Building Code.

[117] Mr Day's evidence was that this would be achieved by jacking the timber subfloor framing up off the piles and either packing out the space between the bearers or installing new piles at the required height. The bearers would then be fixed to the existing piles with retrofitted wire ties in accordance with BRANZ recommendations where the piles were suitable or using standard connections as per NZS 3604:2011 where new piles were installed.

[118] The respondents' experts' methodology involved removing ground debris under the kitchen area, installing both DPC and a vapour membrane to prevent moisture rising into the dwelling substrate. According to Mr Day, an increase in the treatment level of the timber used could also be prudent.

[119] Mr Day opines that this work could be carried out without a building consent under the exception contained in Schedule 1, Part 1 of the Building Act 2004 as "general repairs, maintenance and replacement" or that a discretionary exemption or building consent could be obtained for this work. His evidence is that his suggested remedial work complies with the Building Code. Mr Kearney agreed that the work would be capable of achieving a building consent¹⁹.

[120] This repair work would represent a repair of the earthquake damage consistent with the policy terms, that is, to a condition substantially the same as but not better or more extensive than its condition when new. In this case, that would be a functioning foundation system in the kitchen/dining room area.

[121] Mr Smith, Vero's geotechnical engineer expert, gave evidence that the proposed repair of the kitchen area was appropriate from a geotechnical perspective.

[122] The orders at the end of this Decision provide for the approach set out above.

[123] There will be consequential damage to the kitchen walls, cabinetry, flooring and possibly ceilings. They will need to be repaired to the policy standard, where affected by the repairs required to the foundations. Necessarily this will include repairs to ceiling and wall linings, floor coverings and the reinstallation and levelling of kitchen cabinetry.

¹⁹NOE A page 442

Study and Dining Room

[124] The study area of the property is built on a concrete slab. It is a relatively poorly constructed addition to the house. It is apparent that the study slab is an example of an addition that locked in existing dislevelment.

[125] Mr Kearney agrees that both the dining room and study had pre-existing settlement.

[126] The dining room had settled towards the external Northern wall. The slab of the study was then constructed to form a level join with the uneven floor of the dining room. That the slab has not moved as a result of the earthquakes is supported by the fact that there is no damage at the interface of the study slab and the dining room floor.

[127] This was accepted by Mr Kearney as consistent with there being existing dislevelment and that it was likely built into the structure when the study was added. He agreed that this was an example of built in construction defects which locked in pre-earthquake settlement.

[128] Further support for this is found in the fact that the windows in the study are relatively level, Mr Kearney saying that they were within tolerances.

[129] This, it is inferred, would not be the case had earthquake damage resulted in the study slab dropping. Had the slab dropped as suggested the windows would have been out of level, which they are not. The existence of a weatherboard that now appears to be in contact with, or below ground level suggests that either the ground level has been built up or the weatherboard has been in contact with the ground before the earthquakes. It does not support a finding that the entire foundation has dropped in the study.

[130] Accordingly, the Tribunal finds that any dislevelment in the study slab is not the result of earthquake damage.

[131] The Tribunal finds that there is no earthquake related settlement of the foundations in the dining room. The position with the dining room is also somewhat complicated by the unrelated fact of a water leak from a burst water pipe in this area in 2019.

[132] There is some minor damage to the dining room, but that is largely cosmetic. There is no evidence of earthquake related settlement. The floor level differences would have been in existence when the study was added, as the study “locked in” around 20mm of dislevelment when it was added in the 1970’s. Any earthquake caused dislevelment to the dining room will

be resolved by the work needed to take up the flooring to address the kitchen foundation remediation.

[133] The repairs required to the dining room include repairs to the ceiling and to supply and install heart rimu flooring.

[134] The roping in the wallpaper in the dining room is not earthquake damage. I accept the respondents' evidence that roping is not consistent with earthquake damage. Tearing of the wallpaper would be consistent with the forces generated by the earthquake. Roping is something that has occurred over time and likely related to the use of too much wallpaper paste when the wallpaper was applied. The lack of corroborating related damage to wall linings supports this. The same comments apply to alleged roping damage in the kitchen and bathroom. Repairs to linings ordered in this Decision will deal with roping as a consequence of other work being done.

Bathroom and Toilet

[135] The ceiling, bath and vanity in the bathroom remain relatively level. Again, floor levels at variance to that evidence pre-existing dislevelment.

[136] The bathroom ceiling was replaced at some point pre-earthquakes and is more level than the corresponding floors. This supports a conclusion that any floor dislevelment was pre-existing.

[137] Mr Kearney accepted that had there been earthquake damage in the bathroom, the bath and vanity would not now be level, but were and that if Mr G were to now relevel the bathroom floor, this would put the bath and vanity out of level.

[138] It follows, therefore, that the bathroom has not suffered earthquake damage to its foundations. There is no evidence of foundation damage to the bathroom and no need for subfloor repairs to be undertaken.

[139] Some modest cosmetic repairs to wall coverings are required and they are accepted by both respondents as needed.

Bedroom 1

[140] There is no evidence of earthquake damage to bedroom 1. However, as noted by EQC in its submissions, the repair of the perimeter ring foundation in this area will require the

uplifting of the floor in bedroom 1 and hence, consequential damage will occur to bedroom 1 that will need to be remediated.

[141] Other than the need to make good the floor and any associated damage in bedroom 1, there is no earthquake damage. The French doors and window in this room remain level.

Bedroom 2

[142] Mr G accepted from the outset that there was historic settlement in the Eastern/South Eastern corner of this bedroom. That dislevelment preceded the earthquakes.

[143] That pre-existing damage is consistent with the current slope of the guttering on this side of the house. The guttering was replaced prior to the earthquakes. It drains correctly to the downpipe on the Eastern front side of the house. This evidences that there was no material change in the foundations at this area, as the guttering has an appropriate fall to the outlet.

[144] If the house floor levels were altered to remedy the pre-existing damage, the guttering would not then have the correct fall.

[145] Following the first earthquake, the chimney structure in this room was taken from the roof line to ceiling height. It should be removed to level of the foundations.

[146] Movement of the existing remaining chimney structure in the February 2011 earthquake has damaged the cupboards that span the chimney area. The doors, once sticking one way, now stick the other.

[147] The removal of the chimney structure will necessarily involve the cupboard area with a consequent need to remediate the cupboards, resolving the damage in that area.

[148] The remaining damage is the bedroom 2 door, which is currently dragging on the carpet. That can be addressed by easing the door.

Bedroom 3

[149] There is little evidence of actual earthquake damage in bedroom 3. There is evidence of some damage to the Pinex wall linings and the ceiling. Mr G says that the door now drags on the carpet in that room.

[150] Both respondents allow for some repairs of a cosmetic nature to bedroom 3, in a sum greater than that sought by Mr G. They include repair of wall linings, ceiling repairs and easing of the door.

[151] There is no earthquake damage to the foundations in bedroom 3. The mechanism of foundation settlement and floor level variation in bedroom 3 is the same mechanism and timing of the variations observed in the living room. The floors slope from a high point in the middle of the room to a low along the wall separating bedrooms 3 and 1.

[152] This is consistent with the settlement of the heavyweight load bearing walls when the roof line was in the N-S orientation. This is not earthquake damage.

[153] Further, in the area between the living room and bedroom 3, the difference of 17mm between floor dislevelment and ceiling dislevelment in this room would, if earthquake damage was the cause, have resulted in significant damage to wall linings and there was no such significant damage.

Living room

[154] There was a substantial amount of debate concerning the existence or cause of earthquake damage to the living room. That centred around two issues:

- (a) Floor dislevelment;
- (b) Ceiling heights.

[155] I have already found that the foundations to this dwelling do not need to be rebuilt. That view is the view of both of the respondents' experts and also the Tribunal appointed expert, Ms Halliday. Her report notes that Mr Kearney, whilst promoting a full rebuild in evidence, was in agreement with the expert Ms Halliday that the experts were "not that far off" agreement on a releve strategy. I infer from this that he considered the respondents' experts' views as to releve to be more correct than his proposal to rebuild the foundations completely.

[156] Mr Haynes produced a diagram that recorded his views on the floor levels in the house. This diagram shows the entire house floor levels.

[159] Notable too is her comment that the direction of the roof line changed in this house around 1955 when the roof line changed from running in a N-S orientation to an E-W orientation (that is, from a roofline with its ridgeline across the property to a ridgeline down the length of the property). In terms of her diagram setting out the history of the extensions to the dwelling²⁰, the load of the roof structure borne by the walls changed 90 degrees when the roof line orientation changed.

[160] This moved the loads from the interior wall between the kitchen/living room and the bedroom 1 & 2 external wall to loading the exterior walls of the house on the N-S orientation. Her evidence is that the foundation movement is consistent with the history of these loads. There is a high point in the living room consistent with the loads having been placed on alternatively the E-W walls and then the N-S exterior walls.

[161] The living room was damaged by a fire in 2005. At that time, Mr G replaced part of the flooring in the living room and also had the ceiling replaced.

[162] The ceiling levels and whether they followed the floor levels or were inconsistent with the ceiling levels were an issue as to whether there was earthquake damage in the living room.

[163] Mr Day produced two diagrams in his evidence to demonstrate this issue.

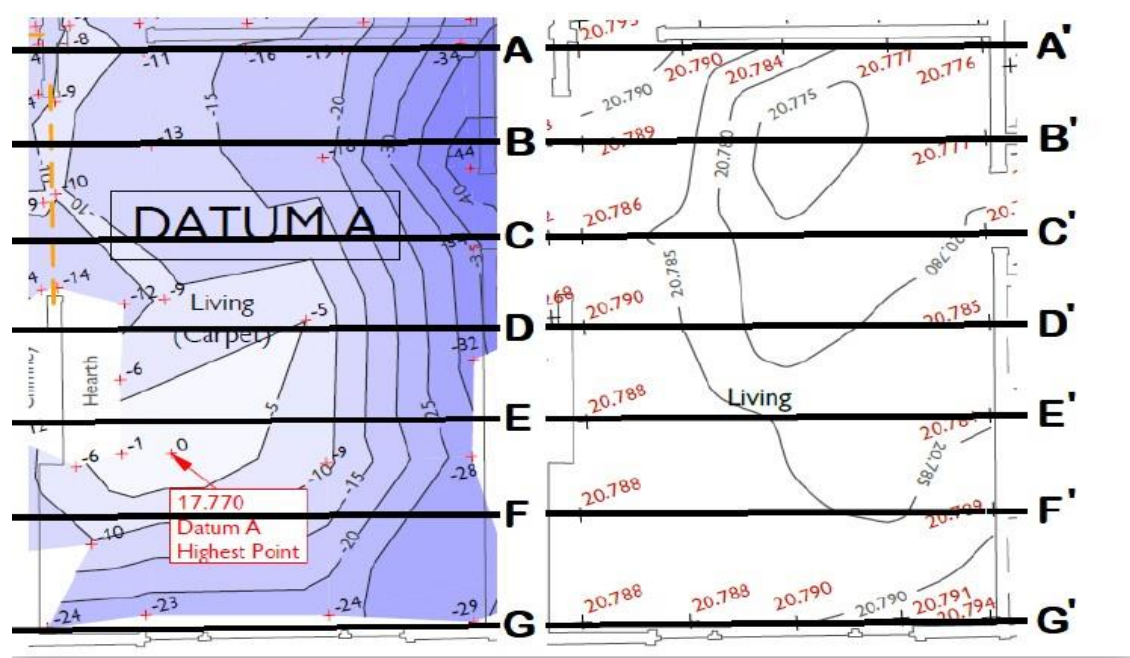


Figure 1 - Sections through the living room in the east-west direction
(floor levels on the left, ceiling levels on the right)

²⁰ Above at [64]

[164] This diagram shows sections through the living room in the E-W direction and show the relative floor and ceiling levels at each line as:

Section Line	Floor slope and direction	Section Line	Ceiling slope and direction
A	26mm to the east	A'	17mm to the east
B	34mm to the east	B'	12mm to the east
C	23mm to the east	C'	5mm to the east
D	22mm to the east	D'	5mm to the east
E	21mm to the east	E'	4mm to the east
F	17mm to the east	F'	1mm to the west
G	5mm to the east	G'	6mm to the west

[165] The correlation between ceiling levels and floors in the N-S direction are:

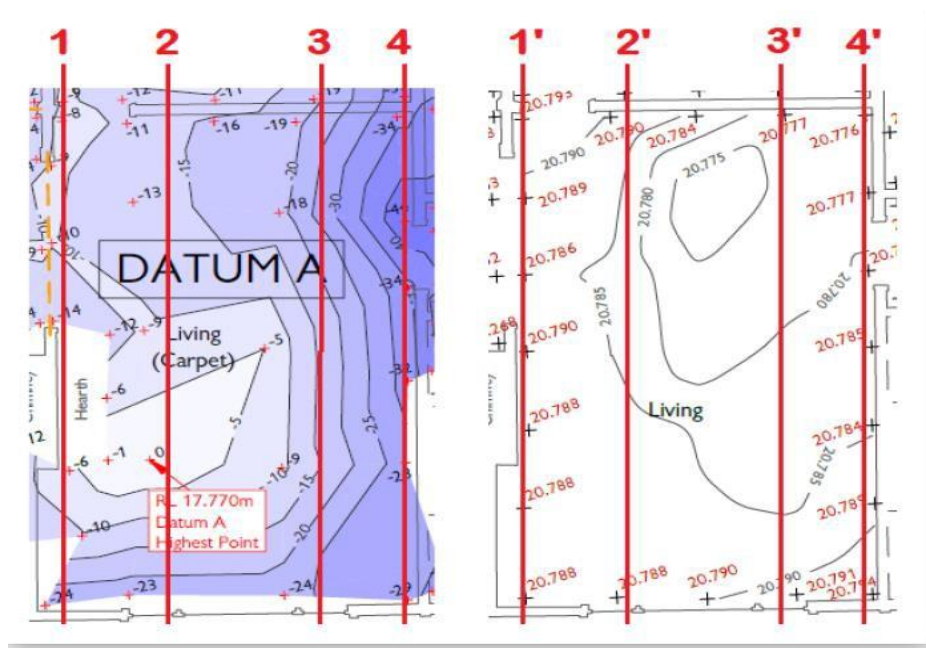


Figure 2 - Sections through the living room in the north-south direction
(floor levels on the left, ceiling levels on the right)

[166] The relative floor and ceiling levels in this direction are:

Section Line	Floor slope and direction	Section Line	Ceiling slope and direction
1	16mm to the south	1'	5mm to the south
2	11mm to the south	2'	2mm to the south
3	4mm to the south	3'	14mm to the south
4	5mm to the south	4'	18mm to the south

[167] The ceiling levels between lines C and G diagram 1 are well within accepted construction tolerance for a new ceiling. In contrast, the floor levels in the living room slope significantly to the East. This, says Mr Day, confirms that the floors were sloping significantly towards the East at the time the ceilings were installed in 2005 and that they have not been materially affected by the earthquakes.

[168] Similarly, the ceiling levels along section line 1 and 2 in the N-S direction are relatively level, although the floors slope to a greater extent. While the ceiling levels along the line of sections 3 and 4 are out of level by up to 18mm, the floors differ by only up to 5mm.

[169] Given that the most significant floor slope in the N-S direction occurs towards the southern end of the western wall (section line 1), yet the ceilings are significantly more level, this shows that there has not been material settlement of the foundations in the living room.

[170] Mr Haynes' evidence, which I accept, was that the Terra Consultants' analysis was not as reliable or accurate as his methodology in relation to floor dislevelment data. Mr Kearney accepted this as correct²¹. He stated:

“I used Mr Haynes' levels when I do it 'cos they're much better levels, far more accurate than ours. Actually when I did all of my level work once I received his levels we put ours aside because it's clear that his are much more accurate.”

[171] Having heard the evidence and bearing in mind Ms Halliday's advice, I find that the floor dislevelment preceded the earthquakes and was not materially adversely affected by the earthquakes. The exception is pile 31 which, on balance, I find was likely to have been damaged and dislodged by the earthquakes. This is in large part due no doubt to the

²¹NOE A pages 320 & 334 9 (noting the erroneous attribution of the evidence at page 320 to Mr King, not Mr Kearney)

construction methodology of the foundations, including their construction on topsoil and lack of fixings to the bearers. Nonetheless, it is earthquake damage and is required to be repaired.

[172] There is a hogging in the middle of the living room floor. However, there is no evidence that that was earthquake damage. It was more likely than not settlement, as per Ms Halliday's hypothesis. Mr Day's calculations also support this.

[173] Turning to the ceiling, Mr G's experts contend for a repair scope that rebuilds the ceiling because of an allegation that it was damaged by the earthquakes.

[174] The evidence does not support that. Whilst it is theoretically dislevel, that is a function of its age and the fact that it was not level prior to the earthquakes. It was, to quote Ms Halliday again, "levelled" in 2005 but never had zero height difference. Given my finding that the floor dislevelment is historic, pre-earthquake settlement, then to have rebuilt the ceiling parallel to the floor would have resulted in a ceiling that to the eye would have been dislevel.

[175] The obvious example would have been a ceiling that reduced in height by comparison to scotias, architraves or skirting boards. Visually, the ceiling was level before the earthquakes. It was not, in fact, level and never had been. The builders had to alternatively pack the battens or notch the ceiling joists to achieve a reasonably level ceiling.

[176] There is a sag in the middle area of the ceiling, but that is explicable by the fact that the fixings are around the perimeter. It is not earthquake damage.

[177] The fact that the floor levels and ceiling levels are different (that is, they do not correlate) is supportive of the finding that the difference is not earthquake damage. Had it been earthquake damage, it would be expected that the damage would have manifested itself in like damage. There is not a correlation of levels amongst the floor and ceiling in the living room.

[178] It is also noted that there is a 17mm difference in floor and ceiling dislevelment between the living room and bedroom 3. Had this differential been caused by the earthquakes, then it is reasonable to assume significant damage to wall linings in that area. There is no such damage.

[179] It is not accepted that the differences between the floor and ceiling levels are evidence of earthquake damage. Rather, the floor levels pre-existed the earthquakes and the ceiling levels were never level or exactly parallel with the floor, as the ceiling was rebuilt in 2005.

The ceiling levels and floor levels are not consistent and do not support an argument that earthquake damage is the reason for that.

[180] Minor repairs are required as a result of the earthquakes, but they go no further than cosmetic repairs to the walls and ceiling, repairs to the door trim and easing of the door into the living room from the hall.

Chimney and fireplace

[181] Mr G claims for the cost to remove and reinstate the fuel burner in the lounge and to rebuild the chimney.

[182] The existing fire and chimney (to ceiling height) were replaced in 2011 under the “winter heat program”. Under that program, a fuel burner was provided to Mr G.

[183] The terms under which the fuel burner was provided preclude Mr G now claiming for the costs to reinstate the previously replaced fireplace and chimney. He signed an acknowledgement called a “Winter Heat Program Solid Fuel Burner Sign Off Advice” that noted that he accepted “that the Solid Fuel Burner installed in the property is accepted in place of the chimney being rebuilt...”

[184] That acknowledgement and acceptance of the fuel burner is the end of any later claim relating to the living room fire being reinstated. The agreement clearly sets out what was agreed. I do not accept Mr G’s interpretation of the agreement as relating only to the upper chimney. The document is clear on its face. The late submission related to the location of the mantelpiece was not addressed in evidence and I do not consider it further.

Hall and entrance door

[185] The evidence shows that the front door and surround was damaged by the earthquakes. The lock and strike plate do not align. They will need to be repaired.

[186] There is also minor wall lining damage in the hall. That too will need to be repaired.

[187] Mr G’s proposed repair of the wall linings and front door frame appears to be a reasonable response to this damage and is accepted.

Wall Verticality

[188] The measurements taken by Mr Haynes as to wall verticality are, he says, inconsistent with earthquake damage. He is critical of Terra Consultants' method of using a 1.2-metre-long digital spirit level, as it produces vertical displacement figures that are unreliable. Mr Kearney agreed that Mr Haynes' wall verticality measurements were to be preferred over Terra Consultant's measurements²².

[189] Mr Haynes' evidence is that there is no consistent correlation between floor slope direction and wall slope direction and hence no evidence of earthquake damage. Mr Kearney accepted that there was no consistent correlation between floor slope direction and wall slope direction²³.

[190] Mr Day concludes that any leaning or bowing of the walls is typical of a house of this age and method of construction. He was unable to replicate Terra Consultants' measurements of wall verticality and in some instances found wall verticality measurements discordant with the general trend and leaning in opposite directions or with very different magnitudes.

[191] The experts' discussion at the hearing clearly supported an argument that any bowing in the walls was a function of construction methods rather than earthquake damage²⁴. Factors such as bowing or cupping of the timbers, dwanging being off parallel or the sawing of the rough sawn timber at construction were discussed.

[192] Mr Day goes on to generally note that there is no evidence of separation at wall and ceiling junctions as would be expected with earthquake damage. Nor was there separation of walls and door/window frames other than in minor areas. Finally, he notes that mitre joints in the architraves did not show sign of significant or recent movement.

[193] I conclude that the wall verticality measurements are not consistent with general earthquake damage. There are some isolated areas of damage. The proposed repair methodology discussed below deals in great part with any verticality issues when wall linings are repaired.

²² NOE A page 423

²³ NOE A page 423

²⁴ NOE A page 421-422

Exterior, including cladding

[194] The exterior cladding at the property is now in reasonably poor condition. Mr G gave evidence that he had the house repainted in 2007 but that the contractors engaged did a poor job. There has been little maintenance following the earthquakes. That is not a criticism of Mr G, but rather a function of the length of time it has taken to resolve his claim.

[195] In accordance with the Tribunal's processes, a visit was undertaken of Mr G's property. The exterior and interior of the home was viewed.

[196] Without departing from the expert evidence and without importing the Tribunal's own observed views ahead of those experts, there was little apparent evidence of earthquake damage in the exterior envelope of the building. This was supported by the joint expert report.

[197] The house is clad in wooden weatherboards. They move in response to climatic conditions and changes. They move in response to moisture levels.

[198] There is no evidence that the observable damage to the exterior envelope of the building was due to earthquake damage. EQC's report dated 29 January 2011 recorded that there was no damage to the exterior at that time (this report before the February 2011 earthquake)²⁵.

[199] Much of the damage to the exterior envelope of the property sought to be recovered by Mr G largely relate to consequential damage to the cladding occurring from the full foundation rebuild which the Tribunal finds is not warranted.

[200] EQC agrees to the repair of the front footpath to the house, as that will be damaged when the isolated epoxy repair to the perimeter ring foundation is undertaken.

[201] But, other than that external repair work, there is no evidence to support an argument that the entire house needs to be repainted or that there are any areas of damage to the weatherboards.

[202] Mr Kearney was unable to identify a causal link between what damage was observable and the earthquakes. He accepted that there were a multiplicity of causes and was properly unable to exclude age, moisture and maintenance as causes.

²⁵ Exhibit "D"

[203] The observable degradation and decay of the weatherboards are due to their age and required maintenance.

[204] There is evidence of some poor workmanship in the original construction, particularly at the study/dining room and study/kitchen junctions. There are missing scribes. They should be addressed, but, again, are not earthquake damage.

Driveway and hard landscaping

[205] These items are not the responsibility of EQC under the EQC Act²⁶.

[206] Any liability for the driveway, BBQ area and rear patio area was settled with Vero²⁷.

[207] Mr G has argued that liability for replacing paths was not included in this settlement. I find that the rear path was included as part of the “patio area & BBQ”. Exhibit “SS-E” of Ms Summer’s affidavit makes it clear that “the path & patio” were included. I interpret this as referring to the path related to the patio, which is at the rear of the property.

[208] The front path was likely not included in the settlement, but is included in the repairs below, as it will be affected by the repairs to the perimeter ring foundation.

Conclusion on Damage

[209] It follows from the discussion above that the full foundation replacement sought by Mr G is not supported by the evidence.

[210] There is relatively minor damage to:

- (a) The perimeter ring foundation – minor exacerbation of historic cracking present pre-earthquakes;
- (b) Pile 31 in the living room;
- (c) The kitchen foundations;
- (d) Ceilings and wall linings in some rooms;
- (e) The cupboard in bedroom 2;

²⁶ Schedule 2 EQC Act

²⁷ Summers affidavit at [8] and exhibit SS-F

- (f) Minor movement in some door frames; and
- (f) The front door.

[211] None of these categories of damage support the remediation approach promoted by Mr G and his experts.

[212] EQC's submissions state the position of this property succinctly:

- (a) The property suffered relatively minor earthquake damage, with the potential for some dislevelment in one room and otherwise minor superstructure damage;
- (b) Much of the damage identified is not earthquake damage but was pre-existing, resulting from – and consistent with - the age and construction of the property.

[213] I now turn to consider how to remediate the damage that is found.

Remediation required

General

[214] The general approach proposed by the respondents' experts and which is accepted is an approach that remediates the failed foundations in the kitchen area and addresses other repairs to the interior to the property. They can be described as:

- (a) Epoxy crack repairs to the perimeter ring beam cracks. Targeted grind out and epoxy fills and repaint;
- (b) Kitchen foundation repairs as outlined above, together with refitting the kitchen cabinetry and benches and associated lining repairs;
- (c) Replacement of pile 31;
- (d) Specific repair to interior linings followed by redecorating;
- (e) Easing of bedroom 2 and 3 and hall doors; and
- (f) Replacing broken roof purlin.

Foundations

[215] The foundations in the kitchen area require remediation as they have failed. The approach proposed by the respondents is accepted as reasonable and appropriate. That is set

out in Mr Day's evidence and set out above. Both Mr Day and Mr Creighton have advised that their approach is in accordance with the Building Code and would, if required, obtain a building consent.

[216] In reaching this finding, I have adopted the expert advice from EQC and Vero's experts as to the appropriateness of the remedial works to the kitchen foundations. They have advised the Tribunal that the approach is appropriate and would either be able to be done without a building consent due to being "General Repairs, Maintenance and Replacement" under Schedule 1, Part 1 of the Building Act 2004 or that either a discretionary exemption or building consent would be obtained from the Council were they sought.

[217] Mr Kearney conceded that, if the Tribunal found that only the kitchen foundations required remediation, that this approach would be appropriate. He agreed that a building consent, if required, would be obtainable.

[218] The significant difference between the respondents' experts and Mr G's experts on remediation of the foundations turns on the approach. I have found that only the kitchen area requires remediation, hence, I intend to adopt the approach developed by Mr Day and Mr Creighton and the costings provided by Vero's QS expert Mr Wilson.

External features, cladding and paintwork

[219] The only recoverable damage here is to the front path to the property, which will be damaged by the perimeter ring foundation repairs in that area. That will need to be removed and replaced. There is no damage to the exterior cladding.

Interior linings and associated works

[220] Much of Mr G's expert evidence on costings is driven off repairs necessitated following lifting the property and replacing the foundation system in its totality. That approach would result in consequential damage to interior linings resulting in the need for their complete removal and replacement. This approach is not appropriate given my findings that only discrete damage has occurred to the foundations. A full relining of all rooms is not necessitated nor required as a result of found earthquake damage.

[221] Some relining of interior walls, with some straightening of wall framing, is required. The costs set out below allow for that work.

[222] There will also be repairs required to floors in the kitchen and dining room and bedroom 1 to provide access to the sub-floor for repairs to the piles (in kitchen) and perimeter ring foundation (bedroom 1). There will also be access to pile 31 through the floor in the living room.

Chimney repairs

[223] This repair is to remove the balance of the chimney in bedroom 2 and address the damage to the cupboards in that room, which will be removed to carry out the chimney removal works.

Cost of Remedial Works

[224] In this Decision, I have held that the respondents' evidence on damage and remedial works is to be preferred. To a significant extent, this is because I have found that the foundations to Mr G's home were not materially detrimentally affected by the earthquakes. The exception is the kitchen area.

[225] Much of Mr G's expert evidence is predicated on the foundations being totally replaced. This, in addition to being an additional cost, also has significant cost implications by way of consequential works to interior parts of the dwelling damaged by the full foundation replacement works. Much of that work is avoided by the approach adopted in this Decision. Hence, much of the costings outlined by Mr G's experts are too extensive in scope and cost.

[226] The Tribunal heard the evidence of the parties' quantity surveyors. For the reasons set out above, the Tribunal is persuaded that the evidence of the respondents' quantity surveyors is to be preferred. Where there is any material difference between the QS evidence of EQC and Vero, a generous allowance is made.

[227] The Tribunal did not receive evidence specifically about the costs to replace pile 31. It did receive evidence as to the costs to replace piles in the kitchen. Using the best evidence available, the Tribunal allocates the sum of \$2,000.00 excluding GST to replace that pile, that sum including an allowance to obtain subfloor access through the living room floor.

[228] The following are the amounts awarded to repair the damage to Mr G's home caused by the CES. The amounts are the amounts suggested by EQC, unless indicated otherwise, when they are Vero's quantity surveyor's costs and are noted by "(V)". The amounts are exclusive of GST.

Area of house	Remedial work	Amount (excl GST)
Foundations	Relevel kitchen/dining room area	\$8,220 (V)
	Epoxy repair to perimeter ring foundation	\$420
	Replace pile 31	\$2,000
Roof purlin	Replace section of broken purlin	\$1,770 (V)
Chimney bedroom 2	Remove and cap chimney in bedroom 2	\$3,700
Front path	Remove and replace front path	\$2,280
Study	Repair ceiling and wall linings	\$1,107.30
Dining room	Repair ceiling and wall linings, replace wall lining paper, replace rimu flooring, relay carpet	\$5,282.56
Kitchen	All interior repairs, including repair ceiling and wall linings, replace wall lining paper, instal vinyl floor covering and adjust all cabinetry	\$9,280.19
Bathroom & toilet	Repair wall linings and trim, instal vinyl floor covering	\$2,474.41
Lounge	Repair wall linings, ceilings and trim, ease hall door	\$3,448.34
Lounge fuel burner	Not awarded	-

Bedroom 3	Replace ceiling linings and paint, repair wall linings and replace wallpaper, replace insulation, replace trims	\$4,991.63
Bedroom 2	All interior repairs, including repair ceiling and wall linings, replace wall lining paper, refix sheet joins, ease and paint door, cupboards repair	\$7,738.15 (V)
Bedroom 1	Lift floor to provide access for perimeter ring foundation works, repair wall linings and jambs/trim	\$4,379.27
Hall and front door	Repair and paint walls and jambs/trim, reframe and fit door	\$3,309.00 (V)
Laundry	Replace plasterboard and paint	\$741.00
General	Allowance to remove/refit fixtures and fittings to allow for other works	\$2,790.00 (V)
Fees	As per EQC scope of works	\$10,475.00
P&G/Margin/GST	As per EQC scope of works	See below

Increase in costs and P&G/Margin/GST

[229] As can be seen from the analysis above, the Tribunal has adopted most of EQC's costs and some of Vero's costs when calculating the amounts payable.

[230] It is well known in the New Zealand market that construction costs have markedly increased in 2021. It is appropriate that this Decision reflects that and grants judgment for amounts due at the date of the Decision.

[231] In order to grant judgment for damages as at the date of this Decision, I direct as follows:

- (a) Each quantity surveyor whose calculations are accepted are to provide updated costs for that element, using exactly the same inputs and calculations as per their scopes of work but updated as at 1 August 2021;
- (b) Those updated figures are to be provided both to the Tribunal and the other parties by 8 September 2021; and
- (c) The quantity surveyor for EQC, Mr Munnelly, is to then collate the figures provided, update the table set out at paragraph 228 above and provide that to the Tribunal. That updating is to include updated resulting figures for P&G, Margin and GST as per EQC's scope of works, to arrive at a final figure.

[232] The margin applicable to the amounts set out is 10% as per EQC's scope of works.

Apportionment

[233] Vero provided evidence from Mr Foote, a quantity surveyor, as to the apportionment of damage, and hence costs, relating to each of the September 2010 and February 2011 earthquakes.

[234] This issue becomes relevant if, and only if, the damage occasioned to Mr G's home exceeds the statutory cap for any one event such that Vero's policy responds.

[235] Due to my findings as to the extent of damage occasioned by the CES and the costs to repair that, the issue of apportionment does not arise in this case. That is because attributing even a rounded figure of approximately 40% of the overall damage to the September 2010 earthquake means that on neither occasion did the extent of damage exceed the statutory cap.

[236] The effect of this finding is that Vero's policy is not required to respond to either event. The statutory cover provided by EQC is sufficient to rectify the damage caused to Mr G's home from both earthquakes.

[237] I would like to thank the parties and counsel for their assistance in this case. I would like to thank Mr G and counsel for their helpful, directed, submissions.

Result

[238] Mr G is entitled to damages to the extent of the final calculations of damage to his home set out in the table set out at paragraph 228 above, once updated in accordance with the directions above.

[239] He is entitled to judgment against EQC, the first respondent, in that sum once determined, less the amounts received by him to date from EQC. Should there be any dispute between the parties as to that deduction, then memoranda may be filed and the issue will be determined on the papers.

[240] For the reasons set out above, Vero is not currently required to contribute to that amount.

[241] Accordingly, the following Orders are made:

- (a) Mr G is entitled to damages to the extent of the final calculations of damage to his home set out in the table set out at paragraph 228 above, once updated in accordance with the directions above;
- (b) Mr G is entitled to judgment against EQC, the first respondent, in that sum once determined, less any amounts already received by him from EQC.



P R Cogswell
Member
Canterbury Earthquakes Insurance Tribunal